504144822 12/14/2016

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4184668

SUBMISSION TYPE:		NEW ASSIGNMENT	
NATURE OF CONVEYANCE:		ASSIGNMENT	
CONVEYING PARTY	(DATA		
Name		Execution Date	
IAN P. SHAEFFER		06/06/2012	
LEILUO		05/00/0010	
RECEIVING PARTY	DATA		05/29/2012
RECEIVING PARTY			05/29/2012
RECEIVING PARTY Name:	Rambus		05/29/2012
	Rambus	s Inc. hterprise Way, Suite 700	05/29/2012
RECEIVING PARTY Name:	Rambus	nterprise Way, Suite 700	05/29/2012
RECEIVING PARTY Name: Street Address:	Rambus 1050 Er	nterprise Way, Suite 700 ale	05/29/2012

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15160538

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ATTORNEY DOCKET NUMBER:	RA903.PCT.C1.US	
NAME OF SUBMITTER:	ANN WILLIAMS	
SIGNATURE:	/ann williams/	
DATE SIGNED:	12/14/2016	
Total Attachments: 3		
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ASSIGNMENT

For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and pursuant to an obligation to Rambus Inc. and/or its affiliates to assign intellectual property, and pursuant to any other applicable agreements among Rambus Inc. and its affiliates, the person(s)

IAN P. SHAEFFER of Los Gatos, CA LEI LUO of Durham, NC

(hereinafter referred to as "INVENTOR" whether singular or plural) has sold, assigned, and transferred and/or does hereby sell, assign, and transfer to Rambus, Inc., having a place of business at 1050 Enterprise Way, Suite 700, Sunnyvale, CA 94089 ("ASSIGNEE"), for itself and its successors, transferees, and assignees, the following:

1. The entire worldwide right, title, and interest in all inventions and improvements ("SUBJECT MATTER") that are disclosed in the following PCT application ("APPLICATION") entitled "Memory Circuit and Method for Its Operation", having:

X PCT Patent Application No. PCT/US2012/034021, filed on April 18, 2012;

- X which claims priority to U.S. Patent Application No. 61/476,594 filed on April 18, 2011 ; or
- Application number (______), filed (______), inserted by (______) on (_____) [Where INVENTOR hereby authorizes and requests ASSIGNEE or its agents to insert here in each parentheses the application number and filing date when known, along with the signature and date of the person completing this section].

2. The entire worldwide right, title, and interest in and to: (a) the APPLICATION; (b) all applications claiming priority from the APPLICATION; (c) all provisional, utility, utility model, design, divisional, continuation, continued prosecution, continuation-in-part, substitute, renewal, and other applications related thereto which have been or may be filed in the United States or elsewhere in the world related to the SUBJECT MATTER; (d) all patents (including reissues, re-examinations, and extensions) which may be granted on the applications set forth in (a), (b), and (c) above; and (e) all right of priority in the APPLICATION and in any underlying provisional or foreign application, together with all rights to recover damages for infringement of provisional rights.

INVENTOR agrees that ASSIGNEE may apply for and receive patents for SUBJECT MATTER in ASSIGNEE's own name.

As part of this Assignment, INVENTOR further agrees to do the following, when requested, and without further consideration: (1) execute all oaths, declarations, assignments, powers of attorney, applications, and other papers necessary or desirable to fully secure to ASSIGNEE the rights, titles and interests herein conveyed; (2) communicate to ASSIGNEE all known facts relating to the SUBJECT MATTER; and (3) generally do all lawful acts that ASSIGNEE shall consider desirable for securing, maintaining, and enforcing worldwide patent protection relating to the SUBJECT MATTER and for vesting in ASSIGNEE the rights, titles, and interests herein conveyed. INVENTOR further agrees to

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App. No.: PCT/US2012/034021 PATENT REEL: 040732 FRAME: 0212 provide any successor, assign, or legal representative of ASSIGNEE with the benefits and assistance provided to ASSIGNEE hereunder.

INVENTOR represents that INVENTOR has the rights, titles, and interests to convey as set forth herein, and covenants with ASSIGNEE that the INVENTOR has not made and will not hereafter make any assignment, grant, mortgage, license, or other agreement affecting the rights, titles, and interests herein conveyed.

INVENTOR grants the attorney of record the power to insert on this Assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

The terms and covenants of this Assignment shall inure to the benefit of ASSIGNEE, its successors, assigns, and legal representatives, and shall be binding upon INVENTOR, and INVENTOR's respective heirs, legal representatives and assigns.

This Assignment may be executed in one or more counterparts, each of which shall be deemed an original and all of which may be taken together as one and the same Assignment.

Each Inventor: Please Sign and Date Below:

Inventor Name: IAN P. SHAEFFER	<u> </u>
State of California) County of Santa Clara)	
On before me,	, Notary Public,
personally appeared Ian P. Shaeffer, who proved to me or whose name is subscribed to the within instrument and his/her authorized capacity, and that by his/her signatur of which the person acted, executed the instrument.	
I certify under PENALTY OF PERJURY under the laws of th and correct.	e State of California that the foregoing paragraph is true
WITNESS my hand and official seal.	
Signature:	(Seal)

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Inventor Name: Lei Lu	jertus.	5/29/2012 Date	
State of North Caroli County of Orange	ina) ·		
On	before me,	, Notary Public,	
personally appeared Lei Luo, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.			
I certify under PENALT true and correct.	Y OF PERJURY under the laws of th	ne State of North Carolina that the foregoing paragraph is	
WITNESS my hand and	official seal.		
Signature:		(Seal)	

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